OPPORTUNITIES TO IMPROVE FRUIT AND VEGETABLE INTAKE AMONG ADOLESCENTS: INSIGHTS FROM A QUALITATIVE STUDY IN KLANG VALLEY

EP065



MINISTRY OF HEALTH MALAYSIA
INSTITUT FOR HEALTH BEHAVIOURAL RESEARCH

Noorhayati Kassim[1], Nurashma Juatan[1], Teh Wai Siew[2], Nadia Amirudin[1], Rosnani Kassim[1], Siti Nurhanim Aimanan[1], Norafizah Jaafar[1], Zanariah Zaini[1], Nabiilah Mohd Nasir@ Nazir[1], Dr. Manimaran Krishnan[1]

[1]Institute for Health Behavioural Reaserch (IHBR)
[2]Nutrition Division, Public Health Programme, Ministry of Health Malaysia

INTRODUCTION

Fruits and vegetables (FV) intake is for supporting adolescent's growth and development. However, consumption remain inadequate globally including in Malaysia and factors influencing intake among adolescents are understudied. Identifying these factors is critical for designing effective healthy eating interventions.



GENERAL OBJECTIVE

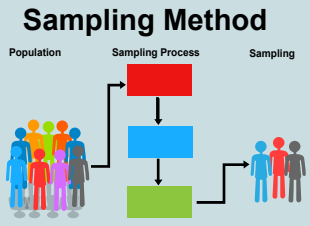
To explore and identify opportunities to improve fruit and vegetable intake among adolescents.



METHODOLOGY

Ethical Approval	**NMRR ID-24-02024-BPM**
Study Design	Qualitative Study Design
Study Setting	Government healthcare clinics in Klang and Petaling district
Study Population	Students from Form 1 to Form 4 (aged 13–16 years), attending public secondary schools in Selangor and the Federal Territory of Kuala Lumpur, under the administration of the Ministry of Education Malaysia, recruited until data saturation was achieved and who do not meet the recommended daily intake of fruits and vegetables.
Sample Size	20 participants
Sampling Method	Purposive sampling based on a maximum variation matrix using predefined inclusion criteria (age, sex, household income, strata, and ethnicity). A name list received from teachers in school involved to identify suitable participants based on the criteria provided by the researchers.
Data collection	In-depth interviews (IDI) using semi-structured interview guidelines.
Data Analysis	Thematic analysis
Date Collection	July – September 2025





RESULT

Socio-demographic of Participants		Frequency (%)
AGE	13	1 (5%)
	14	5 (25%)
	15	8 (40%)
	16	6 (30%)
GENDER	Male	11 (55%)
	Female	9 (45%)
ETHNICITY	Malay	9 (45%)
	Chinese	3 (15%)
	Indian	6 (30%)
	Other Bumiputera	2 (10%)
MONTHLY HOUSEHOLD INCOME*	<RM8,390 (B40)	10 (50%)
	RM8,390 - RM15,729 (M40)	5 (25%)
	>RM15,729 (T20)	5 (25%)

*Note: Income categories were based on DOSM Household Income Survey 2022 (Selangor) thresholds.

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The research identified two primary domains of influence which are environmental and personal factors. Between these two domains, the environmental factor is the main factor.

1. **Environmental Factor** Caregiver emerged as the primary environmental influence.

Theme 1.1: Enhancing Convenience Through Caregiver Support

Adolescents are highly dependent on their parent (usually the mother) to prepare food for immediate eating. The availability of ready to eat fruits remove the barrier of pre-washed, peeled, and sliced produced before consumption.

"My mum cuts it… and puts it in the fridge." (E314)

Theme 1.2: Leveraging Caregiver Supervision

Active monitoring and verbal prompts from caregivers, particularly those responsible for food preparation, influence adolescents' intake. Consumption is often driven by a sense of duty, respect, or fear of reprimand from parents or grandparents.

"If it's already served, I have to eat t… even if I don't want to." (B106)

Theme 1.3: Involving Elderly Family Members

The presence of grandparents can influence household food purchasing, indirectly increasing the availability of FV for adolescents.

"My mum buys a lot because my grandfather lives with us… he always asks

2. **Personal Factor**

Ethnicity and religion emerged as key personal influences shaping dietary practices.

Theme 2.1: Harnessing Ethnicity and Religion

Some respondents reported fruits are consistently available because they are used as religious practices (e.g., for prayer). In addition, ethnic cultural diets respectively naturally prioritize vegetable portions.

"My mum buys fruit for prayer. She buys a lot at the start of the month…we can eat until mid-month… she keeps it in the fridge." (H117)

"Because Indian culture food is generally healthier…we eat in small portions generally… which vegetables and fruits make up the largest portion." (D110)

Theme 2.2: Promoting Self-Identity[1] and Health Benefits

Some adolescents perceive FV intake as a means to achieve physical, aesthetic and health-related goals, fitness and skin health.

"I eat fruits and vegetables… so my body cools down… and I get fewer pimples." (D311)

Theme 2.3: Improving Palatability Through Modified Preparation Methods[2]

Adolescents are likely to eat vegetables if they are cooked with proteins (e.g. eggs or prawns) or through modified preparation methods that enhance palatability..

"If mix with something I'll eat. She (mother) cooks the long beans with eggs… chicken or prawns." (A203)

DISCUSSION AND CONCLUSION

Adolescent FV intake is shaped by the interaction of household dynamics[3,4] and cultural practices[5], highlighting opportunities for intervention. Caregivers, particularly parents and grandparents, play a key role by influencing household food purchasing, preparing ready-to-eat produce[6], and supervising meals to improve adolescents' dietary intake.

These findings suggest that interventions should extend beyond individual education to incorporate family-based approaches, empowering caregivers and leveraging culturally relevant practices to sustain healthy eating habits.

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